REMARKS

I. Status of the Claims

Claims 68-70 are pending in the application. Claims 68-70 were rejected under 35 USC 102(b) as being anticipated by Johnson et al., US Patent No. 6,034,882.

II. 35 USC 102 Rejection: Johnson et al.: Discussion

Claim 68 was rejected under 35 USC 102(b) as being anticipated by Johnson et al. Claim 68 recites a monolithic 3-dimensional memory array comprising: a first set of strips including a first terminal; a second set of strips including a second terminal; a third set of strips including a third terminal; a first pillar having at least one side wall with a slightly positive slope, said pillar disposed between and connecting said first and second sets of strips, and including a first P doped silicon region, a first N doped silicon region and a first insulating region; a second pillar having at least one side wall with a slightly positive slope, said pillar disposed between and connecting said second and third sets of strips, and including a second P doped silicon region, a second N doped silicon region and a second insulating region; wherein each of the pillars is substantially free of stringers.

Claim 68 includes the limitation that "each of the pillars is substantially free of stringers." The disclosure of Johnson et al. is silent regarding the presence of stringers. The drawings of Johnson et al. do not show stringers, but it will be well understood by those skilled in the art that, for the sake of clarity, the representation in drawings is idealized, and it cannot be expected that every flaw and irregularity, including stringers, will be shown; thus the fact that stringers are not shown in the drawings cannot be construed as evidence of their absence.

The description in the specification of the present application, for example in paragraph [0008], shows how a conventional fabrication method used to form self-aligned pillar structures may tend to create stringers. As described in the present application, when pillar structures are formed, a typical procedure would be to etch a first plurality of layers into strips in a first direction, fill the spaces in between the strips with a dielectric, deposit a second plurality of layers, and then etch both second and first plurality of layers in a second direction, orthogonal to the first. The second etch is selective to material constituting the first and second plurality of layers, and does not appreciably etch the dielectric. Accordingly, any material within the first plurality of layers, trapped under the dielectric that is laid down after the first etch, will not be removed in the second etch. This remaining material forms a stringer, which can provide an unintended electrical path between adjacent pillars.

Precisely this fabrication method is described in Johnson et al., for example starting at col. 13, line 26, and illustrated in Figs. 6(a) through 6(g). An etch step actually likely to produce stringers, as described in the present application, is detailed in Johnson et al. at col. 14, lines 13 to 27, and the idealized resulting structure is shown in Fig. 6(g) of Johnson et al. For example, stringers may be formed connecting pillar 51a1 and pillar 51a2 in Fig. 6(g). In the present application, Fig. 3G illustrates an analogous structure formed using the same steps, but also shows the stringer S1 which may inadvertently be formed connecting analogous pillars 304P(1) and 304P(3).

The standard to be applied when the presence or absence of a characteristic in a reference is not explicitly addressed in that reference is described in *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991):

"Such evidence must make clear that the missing descriptive matter is *necessarily present* in the thing described in the reference, and that it would be so recognized by persons of ordinary skill in the art." (Emphasis added.)

Claim 68 includes the limitation that "each of the pillars is substantially free of stringers." There is no description in Johnson et al. describing the *absence* of stringers. Thus in order for Johnson et al. to anticipate, it must be clear to one of ordinary skill in the art that the pillars of Johnson et al. *necessarily* have the characteristic recited in the claim, where that characteristic is the absence of stringers. The preferred method used to create the pillars in Johnson et al. is precisely that which in the present invention is shown to tend to create stringers; thus the *absence* of stringers required by the claim would *not* be assumed by one skilled in the art. That one or more pillars may conceivably be produced by the method of Johnson et al. that is free of stringers is irrelevant; the absence of stringers required by the claim must *necessarily* be present for Johnson et al. to anticipate claim 68. Since the *absence* of stringers is not *necessarily present*, the device of Johnson et al. does not anticipate the invention of claim 68.

It has been shown that Johnson et al. does not anticipate claim 68; thus Applicants request that the 35 USC 102 rejection of claim 68 and its dependent claims 69 and 70 be withdrawn.

CONCLUSION

In view of the preceding Remarks, Applicants submit that this application is in condition for allowance. Reconsideration is respectfully requested. If objections remain, Applicants **respectfully request an interview.** In the event that objections remain, the Examiner is asked to contact the undersigned agent at (408) 869-2921.

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Date

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